## Claims

1. A method of darkening the skin, said method comprising applying to said skin a polymer comprising monomers selected from the group consisting of vanillin monomers, o-vanillin monomers, and mixtures thereof.

5

10

15

20

25

30

- 2. A method of claim 1, wherein said polymer further comprises monomers selected from the group consisting of 3-aminotyrosine, dihydroxy acetone, 3,4-dihydroxybenzoic acid, 3-amino,4-hydroxybenzoic acid, emodin, alizarin, tyrosine, 4,5-dihydroxynaphthalene-2-sulfonic acid, 3-nitrotyrosine, 3-dimethylamino phenol, p-aminobenzoic acid, and mixtures thereof.
- 3. A method of claim 1, wherein said polymer further comprises aloin monomers.
- 4. A method of claim 1, wherein said polymer further comprises dihydroxyphenylalanine monomers.
- 5. A method of claim 1, wherein said polymer further comprises aloin monomers and dihydroxyphenylalanine monomers.
- 6. A method of claim 1, wherein said polymer further comprises a moiety selected from the group consisting of linoleic acid, 9,10-dihydroxystearic acid, linolenic acid, cholesterol, dihydroxycarbazole, and mixtures thereof.

- 7. A method of claim 1, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.
- 8. A method of claim 2, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.

5

10

15

20

25

- 9. A method of claim 3, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.
- 10. A method of claim 5, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.
- 11. A polymer comprising (i) monomers selected from the group consisting of vanillin monomers, o-vanillin monomers, and mixtures thereof and (ii) monomers selected from the group consisting of 3-aminotyrosine, dihydroxy acetone, 3,4-dihydroxybenzoic acid, 3-amino,4-hydroxybenzoic acid, aloin, emodin, alizarin, tyrosine, dihydroxyphenylalanine, 4,5-dihydroxynaphthalene-2-sulfonic acid, 3-nitrotyrosine, 3-dimethylamino phenol, p-aminobenzoic acid, and mixtures thereof.
- 12. A polymer of claim 11, wherein said polymer comprises aloin monomers.
- 13. A polymer of claim 11, wherein said polymer comprises dihydroxyphenylalanine monomers.

14. A polymer of claim 11, wherein said polymer comprises aloin monomers and dihydroxyphenylalanine monomers.

5

15. A polymer of claim 11, wherein said polymer further comprises a moiety selected from the group consisting of linoleic acid, 9,10-dihydroxystearic acid, linolenic acid, cholesterol, dihydroxycarbazole, and mixtures thereof.

10

16. A polymer of claim 11, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.

15

17. A polymer of claim 12, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.

20

18. A polymer of claim 14, wherein said polymer has a molecular weight of from about 10 kd to about 50 10 kd.

\_\_\_

19. A composition comprising a polymer of claim 11 and cosmetically-acceptable topical carrier.

25

20. A method of darkening the skin, said method comprising applying to said skin a composition of claim 19.